REIZEN™ Talking Digital Wrist Blood Pressure Monitor GT-701C

Instruction Manual

Thank you for purchasing our company's product.
Before using, please read this instruction manual carefully.

Contents

	Indicates type BF applied part.
CE	Symbol for "COMPLIES WITH MDD 93/42/ECC REQUIREMENTS"

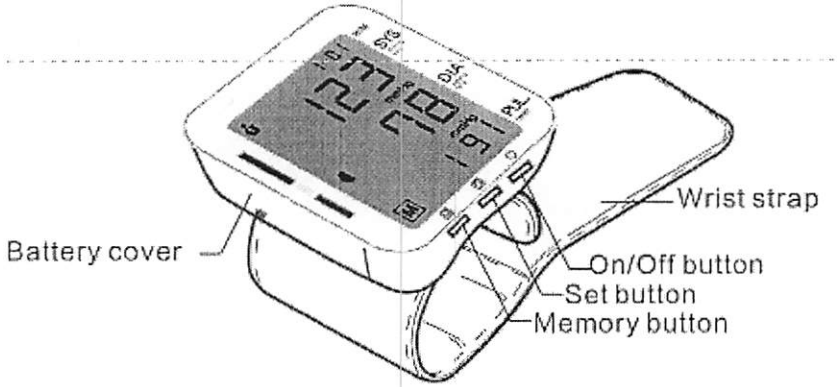
1. Safety Cautions ⚠

- Follow your doctor's guidance.
- Never change the dosage of your medication prescribed by your doctor based on your self-administered blood pressure measurements.
- Self-diagnosis and self-treatment may be dangerous and make your medical conditions worse.
- Certain medical conditions, such as poor peripheral circulation, may cause measurement results taken at the wrist to vary from those taken on upper arm.
- Please do not use it on infants or people who are unable to clearly communicate their own wishes.
- This Digital Blood Pressure Monitor is NOT recommended to be used for children.
- Do not use this device for any other purpose except to test blood pressure.
- Please do not use a mobile telephone or microwave oven near the blood pressure monitor when taking a measurement as it may cause the device to malfunction.

• Precautions:

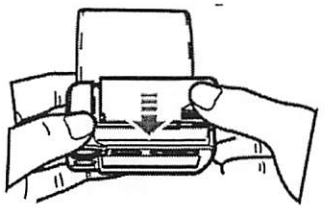
- Do not disassemble, repair, or modify the blood pressure monitor or strap.
- Do not drop the device and avoid impact damage.
- Do not submerge in water or subject to liquid damage.
- Do not bend or stretch the wrist strap.
- Do not press the ON/OFF button before the strap is attached to your wrist.
- Please remove the batteries when not using the blood pressure monitor for an extended period (over 3 months). Otherwise, battery leakage may result and damage the electronics of the device.

2. Name of Parts

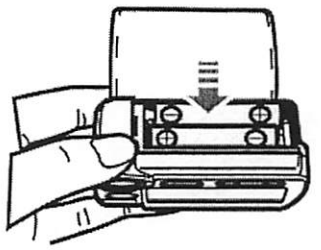


Battery Installation

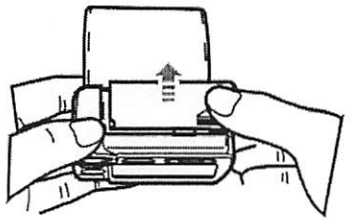
Please use alkaline batteries.



1. Please remove the battery cover as indicated by the direction of arrow.



2. Put the AAA battery into ⊕⊖ according to the positive (+) and negative (-) terminals.



3. Close the battery cover as indicated by the direction of the arrow.

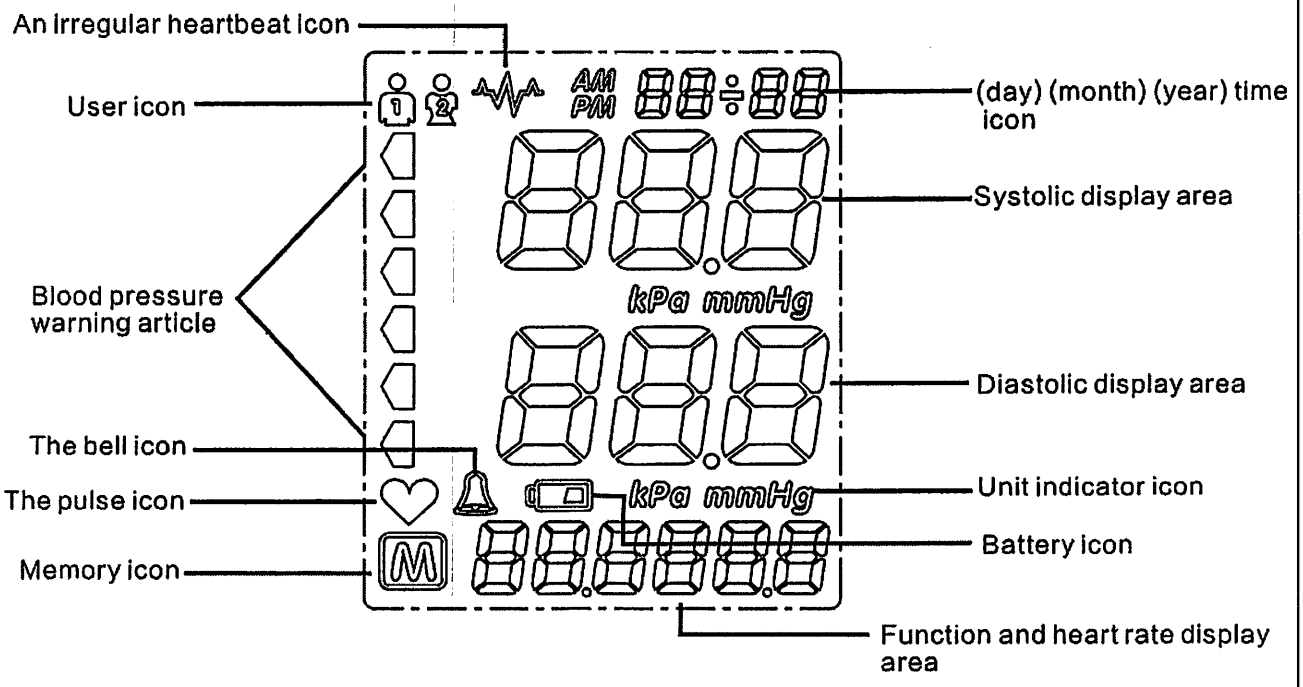
Battery life and replacement

- Using two (2) new AAA Alkaline batteries, the device can test approximately 300 times. (Environment temperature 22℃, Pressure twice every day 170mmHg, 22.7kPa).
- Use alkaline batteries for the best performance and the longest device run time.
- The flashing battery symbol with the "X"  indicates that the batteries have run out of energy and need to be replaced with two new batteries.
- Please remove the batteries when not using the blood pressure monitor for an extended period (over 3 months).

  Otherwise, battery leakage may result and damage the electronics of the device.
- Please do not mix old and new or different brands of batteries.
- Be careful to install the batteries correctly according to the positive (+) and negative (-) polarity symbols. Failing to do so may result in malfunction or damage.
- Turn the device off before installing or replacing batteries.

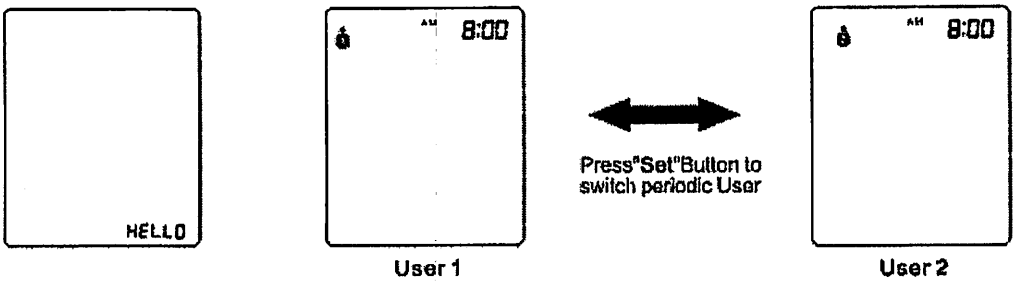
3、Set Up

LCD Display



1) Select User Mode

Press "Set" button (indicated by an "S" bordered by a square) to begin adjusting the settings. "HELLO" will momentarily display and then the device will enter setup mode. Press the "Set" button to toggle between User 1 and User 2, indicated by the pictogram on the upper left side of the LCD screen.

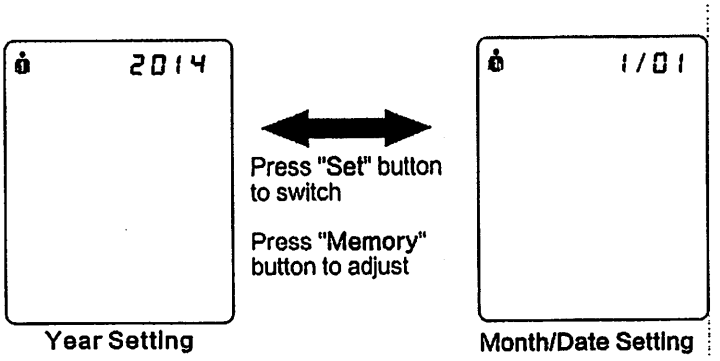


2) The Year/Month/Day set mode

After selecting either User 1 or User 2, press and hold the "Set" button until the year appears flashing in the upper right corner of the LCD screen. To change the displayed year, press the Memory button (indicated by an "M" bordered by a square). Each press will cause the displayed year to increase. Pressing and holding the Memory button will cause the displayed blinking value to change rapidly and sequentially. The possible values the year may be set to is from 2012 to 2099.

When the desired year displays, press the "Set" button to select it. This will result in the LCD screen now displaying a numerical month and day. The month will be blinking. To change the displayed month, press the Memory button (indicated by an "M" bordered by a square). Each press will cause the displayed month to increase. The possible values the month may be set is from 1 to 12.

When the desired month displays, press the "Set" button to select it. This will result in the day's numerical value blinking. To change the displayed day, press the Memory button (indicated by an "M" bordered by a square). Each press will cause the displayed day to increase. The possible values the day may be set is from 1 to 31. To accept the date, press the "Set" button. This will result in the time being displayed in standard 12-hour format with "AM" or "PM" preceding the blinking hour.



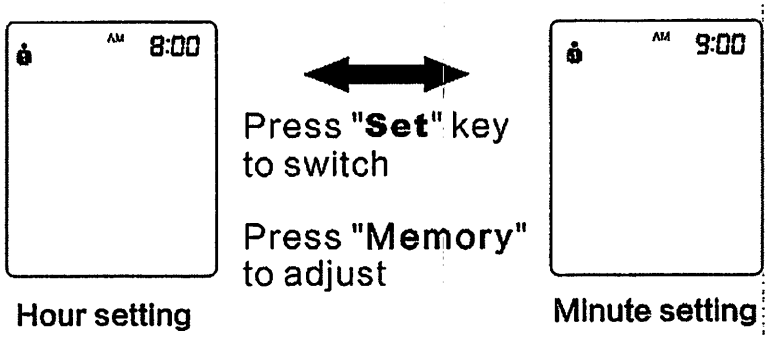
3) Setting the Time

After setting the Year, Month, and Day, the LCD screen will now display "AM" or "PM" and the hour and minute. The hour will be blinking. To change the displayed hour, press the Memory button (indicated by an "M" bordered by a square). Each press will cause the displayed hour to increase. The possible values the hour may be set is from 1 to 12. Note that to change "AM" to "PM" and vice versa, you will need to cycle through the hours.

When the desired hour displays, press the "Set" button to select it. This will result in the minute's numerical value blinking. To change the displayed minute, press the Memory button (indicated by an "M" bordered by a square). Each press will cause the displayed minute to increase. The possible values the minute may be set is from 00 to 59.

When the desired minute displays, press the "Set" button to select it.

Upon completion of the next step, which is selecting the unit of blood pressure measurement, after the device is turned on, the time and date will display alternately.



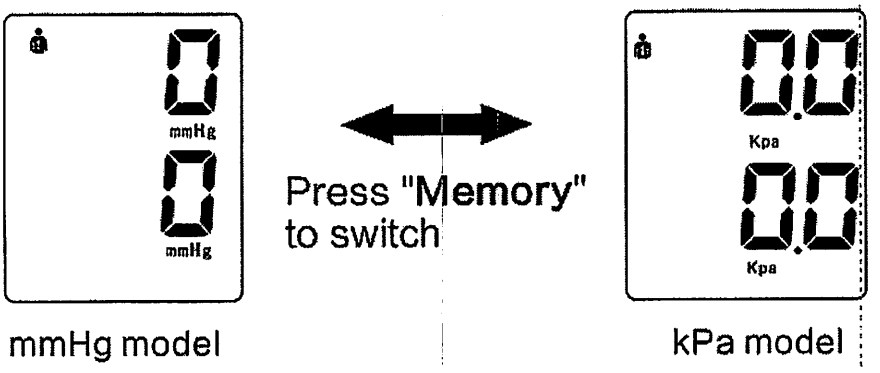
4) Unit of measurement selection

Currently, the standard for blood pressure measurement and expression is mmHg (millimeters of mercury). A possible future standard for blood pressure measurement may become kPa (kilopascals). While the majority of users select mmHg as the unit of measurement, this unit allows you to select either measurement.

After completing the previous setup step of setting the minute and pressing the "Set" button, the LCD screen will now display a blinking "mmHg" (millimeters of mercury). To select this unit of measurement, press the "Set" button to select it.

However, if you wish to change the unit of measurement to "kPa" (kilopascals), press the Memory button (indicated by an "M" bordered by a square) to change the units of measurement. Every press of the Memory button will toggle between these two units of measurement.

Press the "Set" button to select "mmHg" or "kPa". This will result in the Speaker setting displaying "SPE" and a blinking "ON".

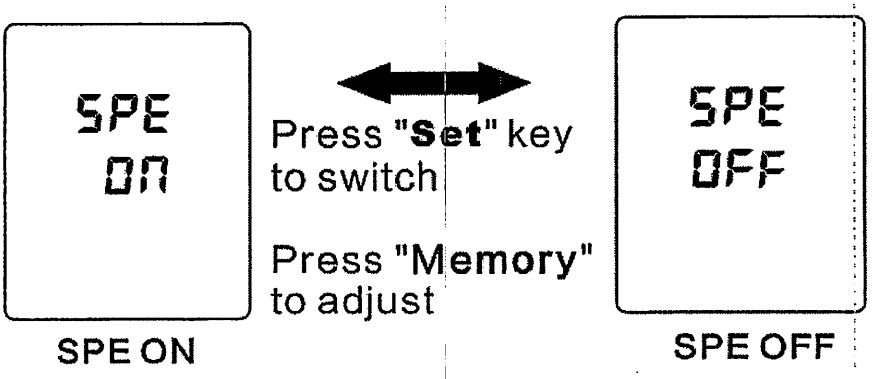


5). Turning the Speaker ON or OFF

After completing the previous setup step of setting the unit of measurement and pressing the "Set" button, the LCD screen will now display "SPE" and a blinking "ON". To select to enable the unit to talk, press the Set button (indicated by an "S" bordered by a square).

To turn the speaker off, press the Memory button (indicated by an "M" bordered by a square), the display will now show "SPE" and a blinking "OFF". Each press of the Memory button will toggle between "ON" and "OFF". Press the Set button to accept the option you choose.

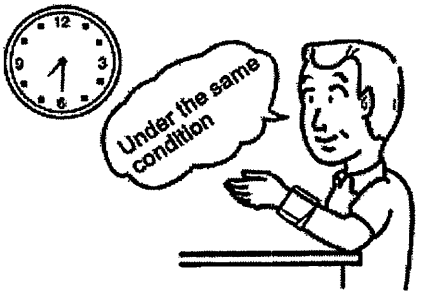
Setup is complete and the unit is now ready to take your blood pressure measurement.



4、Before You Measure Your Blood Pressure

Measurement Suggestions

1. If needed, it is recommended to urinate before measuring blood pressure (a full bladder may produce an inaccurately high reading).
2. Don't smoke, drink caffeinated beverages, or exercise within 30 minutes before measuring your blood pressure.
3. Do not take a measurement in a room which is too hot or too cold.
4. Sit in a chair for at least 5 minutes (preferably 16 minutes) before taking a measurement to obtain the most accurate results.
5. When measuring, sit in a chair with your feet flat on the floor with your back straight and supported.
6. Take a few deep breaths to relax before you test.
7. Do not talk or eat during measurement.
8. Measure at the same time every day.
9. Take two or three readings one minute apart and record the results.



Blood pressure measurement results will vary due to many factors

When you measure blood pressure at home by yourself, it is vital to be calm and unstressed when taking measurements. Measurements may be higher or lower than when you are tested at your doctor's office or hospital. In order to properly manage your blood pressure, it is very important to know the average value of your measurements when testing at home.

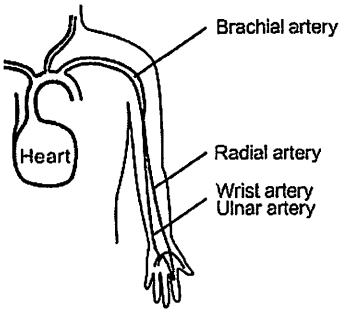
Situations that will affect the reading when you measure

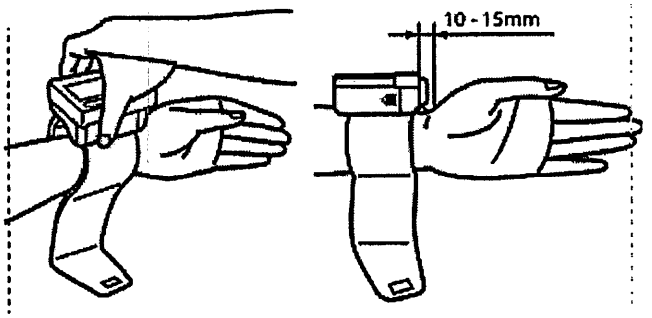
- Within one hour after eating a meal
- After drinking wine, coffee, or tea
- After smoking, exercising, bathing
- Speaking when you measure
- When nervous and stressed
- When your posture is causing abdominal pressure
- When moving your body
- During an abrupt change in temperature
- In different environments
- Riding in a moving vehicle

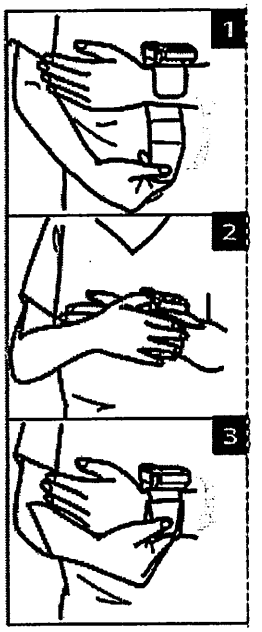
Always discuss your blood pressure measurement results and appropriate treatment with your doctor.

5、Using the Wrist Cuff

- Note: The monitor is calibrated to provide maximum accuracy measuring blood pressure using the left wrist.
- Please apply the wrist cuff directly on the bare left wrist.







1) Position the left thumb up and then put the wrist cuff on your wrist

• As shown, position the wrist strap so that it is approximately ½ inch (13 mm) from the palm of your hand.

2) Hold the end of the wrist strap and wrap it around your wrist. The strap should be tightened evenly, with no room between the cuff and your wrist.

• Do not overtighten so much as to cause pain. However, if too loose, the measurement will not be accurate.

3) Please fold the spare part of wrist strap as shown in figure 3.

• If there is any excess portion of strap remaining after the cuff is applied, it may be folded over and attached.

6、Correct Measurement Position

(1) The accuracy of the results is dependent on both proper body position and following these procedures.

• When measuring, sit comfortably in a chair with your feet flat on the floor with your back straight and supported.

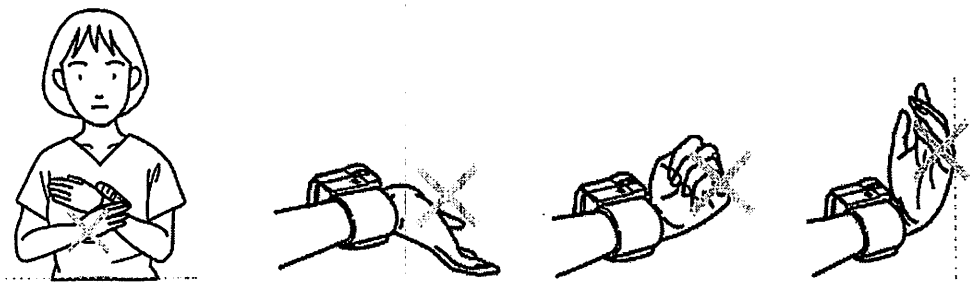
• Make sure the wrist cuff is at the same level as your heart in order to obtain the most accurate reading.

• Make sure the wrist cuff is at the same level as your heart in order to obtain the most accurate reading.

• Do not move or talk.

• Maintain a straight wrist, hand, and finger position in alignment with your forearm.

(2) Please avoid the following posture and hand positions when measuring.

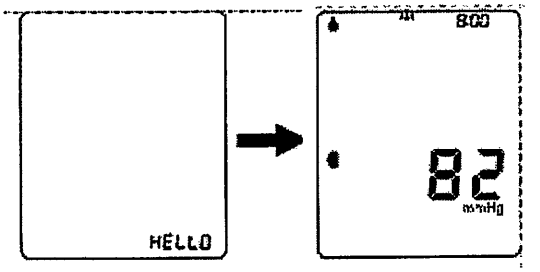


• Note: The above incorrect positions may cause higher blood pressure measurements, especially with clenched fists.

• Please do not use your other hand to hold the unit as that will cause measurement errors.

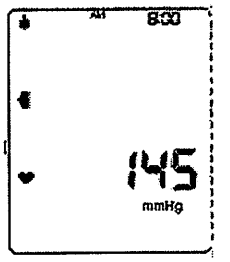
7、Measuring Your Blood Pressure

Attach the wristband as previously instructed in "Using the Wrist Cuff" (Section 5), following "Correct Measurement Position" instructions (Section 6), and take your blood pressure measurement



1）Press the On/Off ⏻ power button.

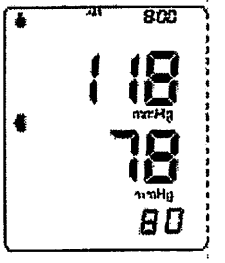
The LCD Screen will display "HELLO" and (if the Speaker was set to "ON") the unit will announce directions to keep silent, relax, and to keep the monitor at heart level.



2）The wrist band will inflate automatically.

3）When measuring pulse rate, the heart icon will flash and the readout numbers will fluctuate.

4) After reaching the correct inflation level, the wrist cuff will gradually deflate automatically. If during deflation, the monitor senses that more inflation is required to properly measure the user's blood pressure, the unit will automatically re-inflate to acquire a measurement.



5) After the measurement is complete, the cuff will deflate, and the unit will display the results on the LCD screen and (if the Speaker was set to "ON") it will announce your Systolic, Diastolic, and Pulse readings. The unit will also announce whether your blood pressure is low, normal, or high. In addition, this will be visually indicated on the left side of the screen alongside the green, yellow, and red markings on the monitor.

6) Measurements will display on the screen until you press the On/Off power button to turn off the device. Otherwise, after approximately 150 seconds, the unit will automatically shut down.

Note: When kPa has been selected as the unit of measurement, it will be displayed rather than mmHg.

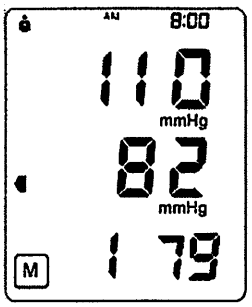
• Interrupting a measurement

If for some reason it is necessary to interrupt the measurement, don't hesitate to press the On/Off power button to turn the unit off. The device will automatically deflate the wristband immediately.

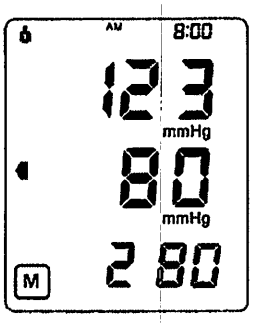
• How to use memory function

This device will automatically store the last 99 blood pressure readings for both User 1 and User 2.

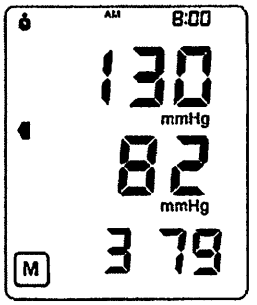
After you have taken several blood pressure measurements, if the device is on, press the On/Off power button to turn the unit off. While the device is off, press the Memory button (indicated by an "M" bordered by a square) and the unit will display "HELLO". When you press the Memory button a second time, the screen will display an "M" bordered by a square in the lower left-hand side of the LCD with the number "1" next to it as well as the last measurement taken which is saved in memory. Each subsequent press of the Memory button will display each previous blood pressure measurement saved in memory, from newest to oldest, in numbered sequence from "1" up to "99".



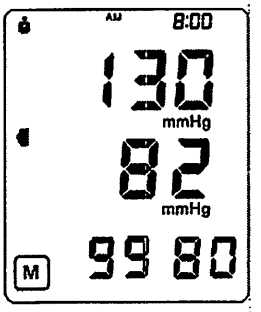
Measure the memory



Measure the memory



Measure the memory



Measure the memory

• To delete all previous readings from memory

If the device is on, press the On/Off power button to turn the unit off. While the device is off, follow this procedure:

1) Press the Set button (indicated by an "S" bordered by a square) and the unit will display "HELLO";

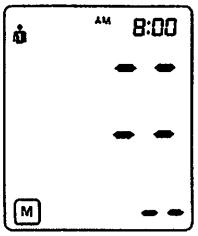
2) Press the Memory button (indicated by an "M" bordered by a square);

3) Simultaneously press the Set button, the Memory button, and the On/Off power button (you may find it easiest to accomplish this using both your thumbs, by pressing the Memory button with your left thumb and the Set button and On/Off button with your right thumb – all at the same time).

Note: If successful, the LCD screen will momentarily display all symbols and then go blank.

4) To confirm the memorized readings have been deleted:

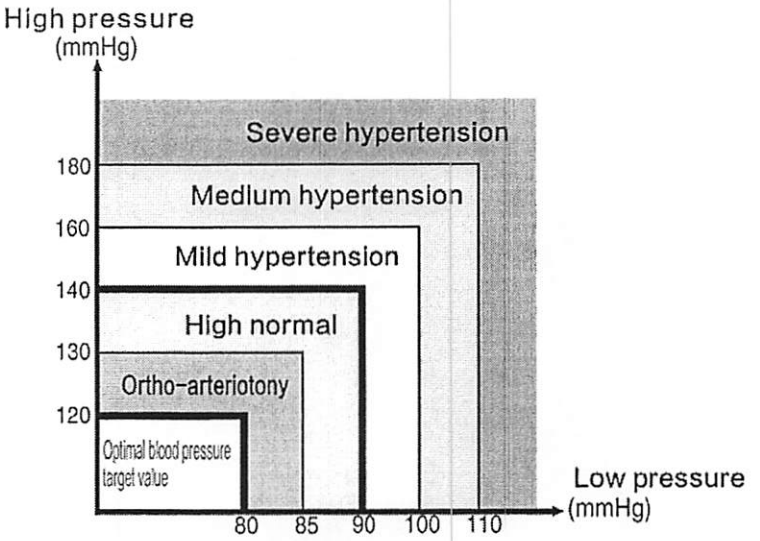
Press the Set button and then press the Memory button. The monitor should display an "M" bordered by a square in the lower left-hand side of the LCD with dashes to the right of it.



8、Blood Pressure

Blood Pressure Classification by World Health Organization (WHO)

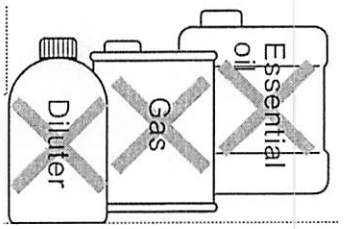
The World Health Organization (WHO) and the International Society of Hypertension (ISH) formulated the following Blood Pressure Classification shown below.



*** According to the WHO/ISH blood pressure classification (1999 revision)**

* ISH: International Society of Hypertension

9、Maintenance and Care



- Use a dry cloth to clean the unit.
- Do not allow water or other liquid to get inside the unit.
- Do not wash the wrist cuff or expose to liquid.
- Do not clean the unit with any harsh or volatile liquids.
- Do not subject to impact.
- Do NOT store under the following conditions:
  - Where there is water
  - Where there is direct sunlight, high temperature, dampness, humidity, excessive dust, or near salt water.
  - Where there are corrosive chemicals.
- Please remove the batteries when not using the blood pressure monitor for an extended period (over 3 months) to prevent battery leakage.
- Failure to comply to the above will void the manufacturer's warranty.

10. Troubleshooting

What is the cause of the "E" screen display error?

The usual causes are:

1) Body movement during measurement;
2) Talking during measurement;
3) The wrist cuff is too loose;
4) The wrist is not in the correct position.

Symptom	Cause	Solution
The unit does not operate when you press the "On/Off" power button	Battery power is low.	Replace the batteries with two new AAA alkaline batteries.
The unit operates but cannot take a measurement or the battery icon is flashing.	Battery power is insufficient.	Replace the batteries with two new AAA alkaline batteries.
The blood pressure reading is different each time or is extremely high (or low).	Blood pressure readings constantly vary as a result of the time of measurement and psychological condition. Take a few deep breaths to relax before taking a measurement. Ensure that body posture as well as measurement position is correct.	

11. Specifications

GT-701C is an automatic device that attaches to the wrist to quickly and conveniently measures systolic and diastolic blood pressure and pulse rate.

Product name	Digital Blood Pressure Monitor
Model	GT-701C
Display style	Digital LCD display
Measurement style	Oscillographic
Measurement range	SYS Pressure: 55～255 mmHg DIA Pressure: 25～195mmHg Pulse rate: 40～199 Pulses/min
Cuff display range	0～299 mmHg
Repeatability	≤0.7kPa
Air impermeability	≤0.8kPa/min
Accuracy	Pressure: ±3mmHg Pulse rate: ±5%

Power source	DC3V(2 pcs LR03 AAA Alkaline Batteries)
Operating Environment	Temperature: 5℃～40℃ , Humidity15%RH～85%RH, Atmospheric pressure: 86kPa-106kPa
Storage & transportation environment	Temperature: -20℃～70℃, Humidity10%RH～95%RH, Atmospheric pressure: 50kPa-106kPa
Security classification	Internal electric source B type
Press method	Reed Frequency pump
Rapidly exhaust method	Opening of rapid exhaust valve
Pressure measurement	Electrostatic capacitive pressure sensor
Pulse measurement	Semiconductor pressure sensor
Main frame dimension	Length 70mm×Height 72mm×Width27mm
Wrist strap	135-215mm
Type of protection against electric shock	Internal powered equipment
Degree of protection against electric shock	Type BF applied part.
Applied part	Wrist strap(cuff)
Classification according to the degree of protection against ingress of water	IP22
Equipment not suitable for use in the presence of flammable mixtures	Not AP or APG equipment
Mode of operation	Continuous
Software version	V1.0
Service life	5 years

12. Electromagnetic Compatibility

Table 1-1:

Guidance and manufacturer's declaration – electromagnetic immunity			
The Digital Blood Pressure Monitor (GT-701C) is intended for use in the electromagnetic environment specified below. The user of the Digital Blood Pressure Monitor (GT-701C) should assure that it is used in such an environment.			
Immunity test	**IEC 60601 test level**	**Compliance level**	**Electromagnetic environment – guidance**
Electrostatic discharge (ESD) IEC 61000-4-2	±6 kV contact ±8 kV air	±6 kV contact ±8 kV air	Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30 %.
Electrical fast transient/burst IEC 61000-4-4	±4 kV for power supply lines ±2 kV for input/output lines	±4 kV for power supply lines ±2 kV for input/output Lines	Mains power quality should be that of a typical commercial or hospital environment.
Surge IEC 61000-4-5	±2 kV differential mode ±4 kV common mode	±2 kV differential mode ±4kV common mode	Mains power quality should be that of a typical commercial or hospital environment.

Voltage dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11	<5 % *UT* (>80 % dip in *UT*) for 0,5 cycle 40 % *UT* (60 % dip in *UT*) for 5 cycles 70 % *UT* (30 % dip in *UT*) for 25 cycles <5 % *UT* (>80 % dip in *UT*) for 5 sec	<5 % *UT* (>80 % dip in *UT*) for 0,5 cycle 40 % *UT* (60 % dip in *UT*) for 5 cycles 70 % *UT* (30 % dip in *UT*) for 25 cycles <5 % *UT* (>80 % dip in *UT*) for 5 sec	Mains power quality should be that of a typical commercial or hospital environment. If the user of the Digital Blood Pressure Monitor (GT-701) requires continued operation during power mains interruptions, it is recommended that the Digital Blood Pressure Monitor (GT-701) be powered from an uninterruptible power supply or a battery.
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	3 A/m	3 A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.
NOTE *UT* is the a.c. mains voltage prior to application of the test level.			

Table 1-2:

Guidance and manufacturer's declaration – electromagnetic immunity			
The Digital Blood Pressure Monitor (GT-701C) is intended for use in the electromagnetic environment specified below. The user of the Digital Blood Pressure Monitor (GT-701C) should ensure that it is used in such an environment.			
Immunity test	**IEC 60601 test level**	**Compliance level**	**Electromagnetic environment – guidance**
Conducted RF IEC 61000-4-6 Radiated RF IEC 61000-4-3	3 Vrms 150 KHz to30MHz 3 V/m 80 MHz to 2,5 GHz	3 V 3 V/m	Portable and mobile RF communications equipment should be used no closer to any part of the Digital Blood Pressure Monitor (GT-701), including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. **Recommended separation distance** **$d=1.2\sqrt{P}$** **$d=1.2\sqrt{P}$ 80MHz to 800MHz** **$d=2.3\sqrt{P}$ 800MHz to 2.5 GHz** where *P* is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and *d* is the recommended separation distance in metres (m). Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey,[a] should be less than the compliance level in each frequency range.[b] Interference may occur in the vicinity of equipment marked with the following symbol:
NOTE 1 At 80 MHz and 800 MHz, the higher frequency range applies. NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.			
a Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the Medical Daylight is used exceeds the applicable RF compliance level above, the Medical Daylight should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as reorienting or relocating the Digital Blood Pressure Monitor (GT-701C). b Over the frequency range 150 kHz to 80 MHz, field strengths should be less than [*V*1] V/m.			

Table 2:

Guidance and manufacturer's declaration – electromagnetic emissions		
The Digital Blood Pressure Monitor (GT-701C) is intended for use in the electromagnetic environment specified below. The user of the Digital Blood Pressure Monitor (GT-701C) should ensure that it is used in such an environment.		
Emissions test	**Compliance**	**Electromagnetic environment – guidance**
RF emissions CISPR 11	Group 1	The Digital Blood Pressure Monitor (GT-701C) uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
RF emissions CISPR 11	Class B	The Digital Blood Pressure Monitor (GT-701C) is suitable for use in all establishments, including domestic establishments and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.
Harmonic emissions IEC 61000-3-2	Class A	
Voltage fluctuations/ flicker emissions IEC 61000-3-3	Complies	

Table 3:

Recommended separation distances between portable and mobile RF communications equipment and the Digital Blood Pressure Monitor			
The Digital Blood Pressure Monitor (GT-701C) is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The user can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the Digital Blood Pressure Monitor (GT-701C) as recommended below, according to the maximum output power of the communications equipment.			
Rated maximum output power of transmitter W	**Separation distance according to frequency of transmitter m**		
	150 KHz to 30 MHz	**80 MHz to 800 MHz**	**800 MHz to 2,5 GHz**
0,01	0.12	0.12	0.23
0,1	0.38	0.38	0.73
1	1.2	1.2	2.3
10	3.8	3.8	7.3
100	12	12	23
For transmitters rated at a maximum output power not listed above, the recommended separation distance *d* in metres (m) can be estimated using the equation applicable to the frequency of the transmitter, where *P* is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer. NOTE 1 At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies. NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.			

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